

In the Specification:

Please amend the specification as follow:

[0001] The present invention generally relates to a Hydraulically Power Assisted Steering system (HPAS-system) arranged to supply a steering assist force to the steering assembly of an automobile or a vehicle. In ~~particularly~~ particular the invention relates to an HPAS-system including a rotary valve unit, which may be actuated to dynamically alter the steering assist force produced by the HPAS-system.

[0003] Traditionally, various Hydraulic Power Assisted Steering (HPAS) systems have been used to add a certain amount of assist force ~~or assist force~~ to the steering assembly of a vehicle. These traditional HPAS-systems are typically based on an assist characteristic, a so-called boost-curve. The shape of a boost-curve is typically and essentially determined by the design of the valve and the pump of the HPAS-system. The boost-curve in a traditional HPAS-system is therefore static.

[0019] The forces needed to obtain ~~[[an]]~~ a displacement or an offset – e.g. an offset ~~angel~~ angle α_{off} – by directly actuating a part of a rotary valve are fairly low, mainly comprising flow forces created within the valve and friction forces emanating from the actuated valve part.

[0034] The HPAS-system 100 shown in FIG. 1 comprises a steering assembly, i.a. comprising a steering wheel 120. The steering wheel 120 is generally disposed in the vehicle passenger compartment and manually operated by the driver of the vehicle to steer the road wheels 127. Further, the steering assembly includes a steering shaft 121, operatively coupled to the steering wheel 120. Said steering shaft 121 rotates in synchronization with the steering wheel 120 and is preferably directly attached to the steering wheel 120. The steering assembly also employs a pinion shaft 122, operatively engaged with steering shaft 121. The steering shaft 121 and the pinion shaft 122 are interconnected via an interconnecting assembly 130. Said pinion shaft 122 is preferably coupled at one end to a pinion gear assembly 123 for converting angular rotation of the pinion shaft 122 to linear movement ~~[[on]]~~ of a rack 124, where the rack 124 is coupled on opposite ends to tie rods 125 and connector rods 126, which are movable to control left and right rotation of the road wheels 127.

[0044] Said second chamber 335 communicates with a second pair of inner through-holes 340 arranged in the second cylindrical valve member 310, where the second pair of inner through-holes [[330]] 340 are adapted to dynamically communicate with a second pair of outer through-holes 345 arranged in the first cylindrical valve member 305, where the second outer through-holes 345 communicate with a third chamber 350, which in turn communicates with an outlet through-hole 360 for an outlet of the received pressurized hydraulic fluid, where both the third chamber 350 and the outlet through-hole 360 are arranged in the extension of the pinion shaft 122 for supplying pressurized hydraulic fluid to the servo-motor 129.

[0050] The invention is not limited to the rotary valve 300 illustrated in FIGS. 2, 3 and 4. On the contrary, a rotary valve according to the present invention embodiments may e.g. have only one inlet through-hole 315 and one outlet through-hole 360, in which case there may be only one first, second and third chamber 315, 335 and 350 and such an embodiment may only have the through-holes 325, 330, 340, 345, where said ~~cambers~~ chambers and said through-holes may extend a full circle or nearly a full circle around the steering shaft 121. Moreover, some embodiments may have only one first through-hole 325, 330 and/or only one second through-hole 340, 345, whereas other embodiments may have three or more such through-holes. In addition, the through-holes 325, 330, 340, 345 in the first and second cylindrical valve member 305, 310 are not limited to any specific shape. On the contrary, they may have any suitable shape, e.g. rounded, elongated and/or angular. In addition, the through-holes 325, 330, 340, 345 may be arranged in any suitable direction, e.g. more or less in the axial direction with respect to the shafts 121, 122 and/or more or less in the rotational direction of the shafts 121, 122